R4 PFAS INFORMATION – Water Related Issues

February 8, 2019

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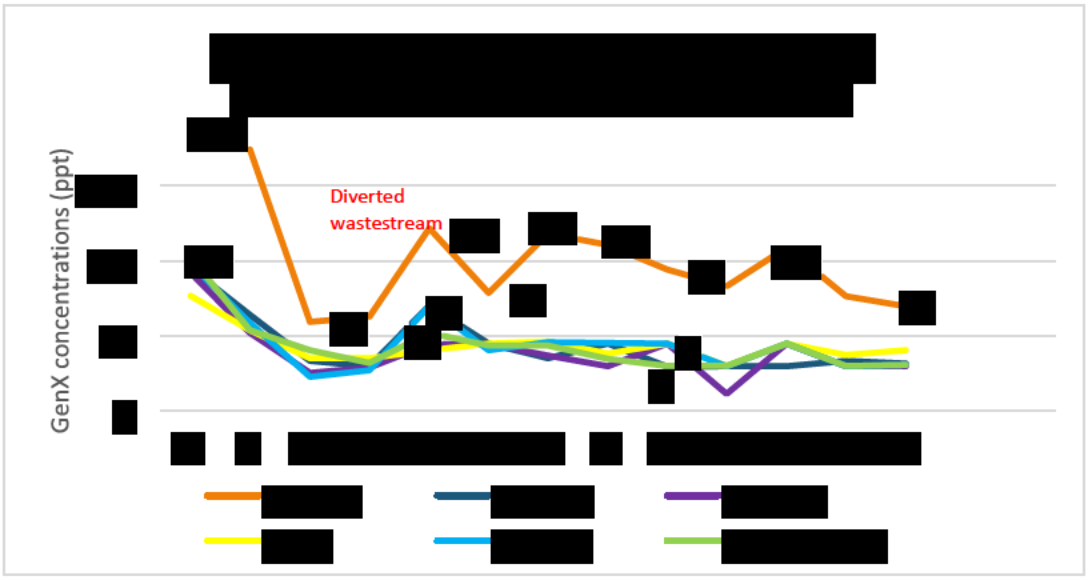

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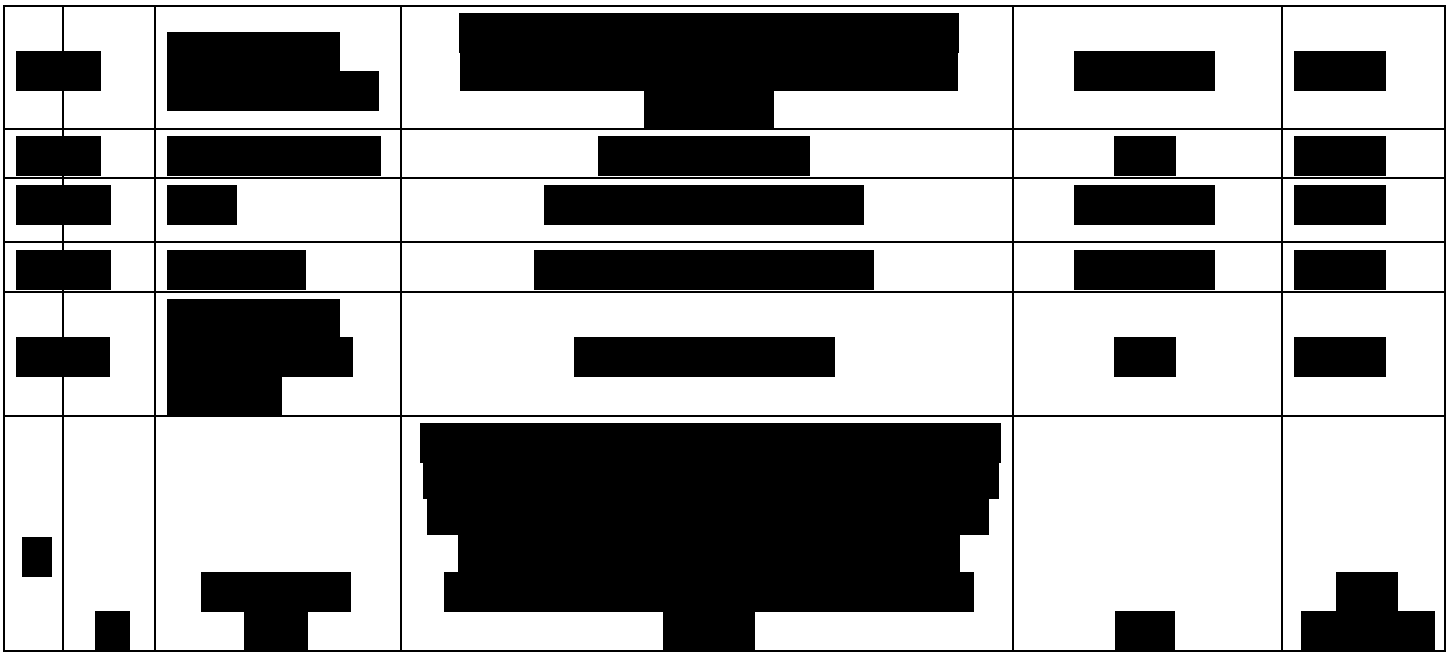
Table 1: Region 4 PFAS - Summary Table					
Public Water Systems with PFOA/PFOS Sampling Events Above 70 ppt					
#	State	PWS Name	Current Status	PFAS Contaminants	Data Source
1	AL	Centre Water and Sewer	Ongoing monitoring. Blended source, still elevated PFC levels near or above HA. GAC installation (7/2020) (UCMR3 max combined PFOA+ PFOS: 121ppt)	PFOA, PFOS, PFBS, PFBA, PFHpA, PFHxA, PFPA	UCMR3



GEORGIA-ALABAMA

Gadsden and Centre: Dalton Utilities land applies the waste from the County landfill and carpet recyclers to Loopers Bend, which is surrounded by the Conasauga River, a conduit of PFC contaminants into Lake Weiss directly upstream from the two Alabama public water systems, Gadsden and Centre. Both systems have filed lawsuits against multiple Georgia businesses, including carpet manufacturers, that are suspected PFC producers contributing to downstream contamination near their intakes.

Gadsden and Centre have conducted weekly to biweekly monitoring of their raw and finished water noting that their combined PFOA-PFOS levels have typically been at or near the HA. The highest PFAS levels for Gadsden and Centre were seen in the June 12, 2018 data results. Gadsden's finished PFAS levels were as follows: PFOA (71 ppt), PFOS (120 ppt) and PFBS (290 ppt). Centre's finished PFAS levels were as follows: PFOA (72 ppt), PFOS (150 ppt) and PFBS (320 ppt).

Gadsden installed GAC treatment in December 2018. Centre plans to install treatment in Summer 2020. ADEM, Centre and Gadsden are concerned that their GAC pilot will not adequately address the increasing PFAS concentrations in their raw water supply or other emerging PFAS compounds that may become subject to regulation and health advisories.

EPA involvement: Since the HA, Region 4 has remained closely engaged with ADEM and Alabama Department of Public Health (ADPH) to discuss monitoring results, assist with public notification efforts, determine alternatives in reducing PFAS levels in finished water and facilitate data sharing between ADEM and GA EPD. Additionally, ADEM has expressed concerns regarding treatment techniques for Landfill Leachate and shorter-chain compounds,

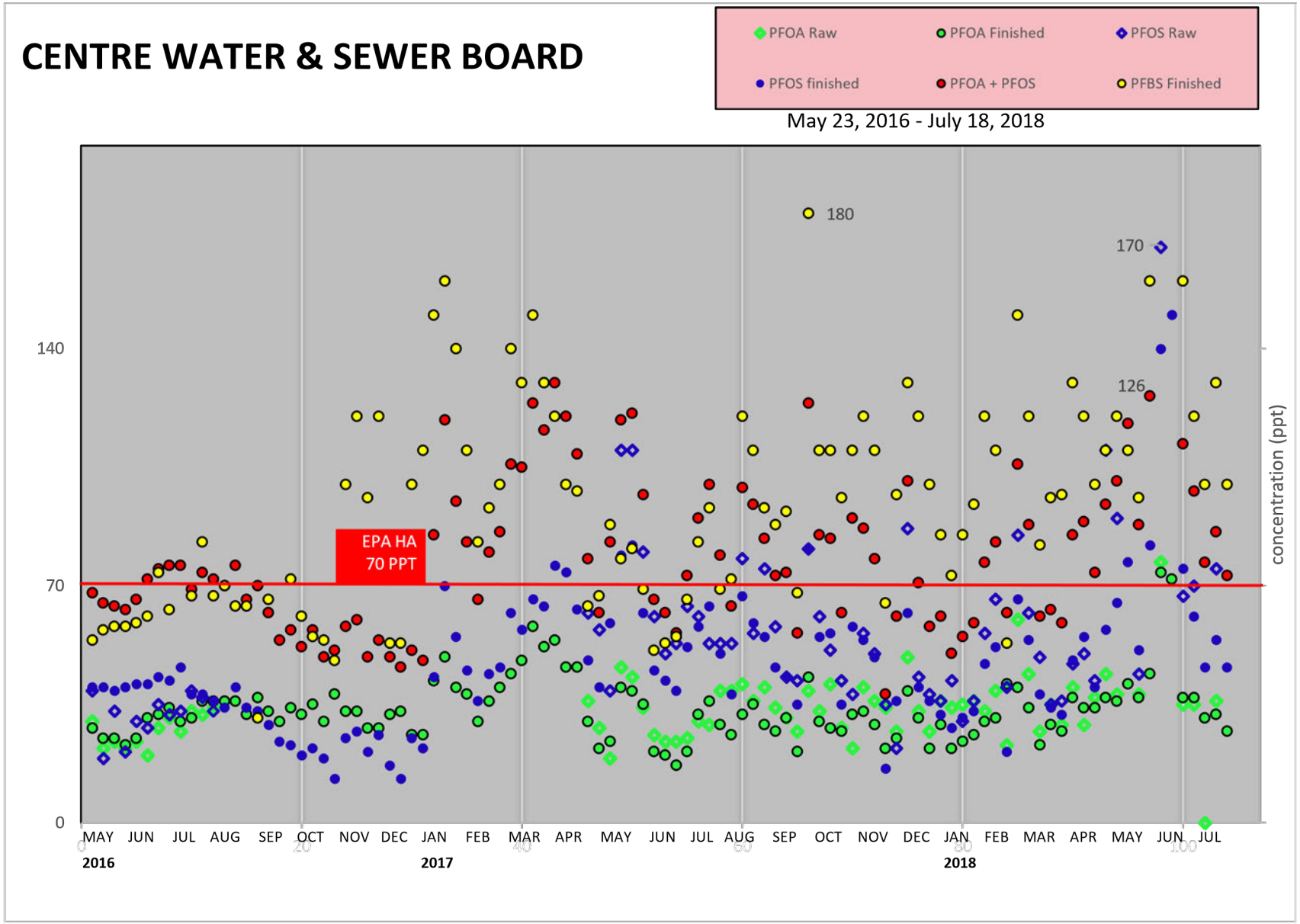
such as PFBS, which has consistently been the highest of the 7 monitored PFC compounds for Centre and Gadsden.

Cross-state Migration (Georgia-Alabama) SESD-Chattooga Study: ADEM suggested that there is a correlation between high rainfall in the North Georgia area which has led to increased PFAS levels in the Coosa River and ultimately in the Centre and Gadsden intakes. The Coosa and Chattooga Rivers independently flow into Lake Weiss, but limited information is known about PFAS levels on the Chattooga River because most efforts have centered around the direct linkage between Loopers Bend and the Coosa River.

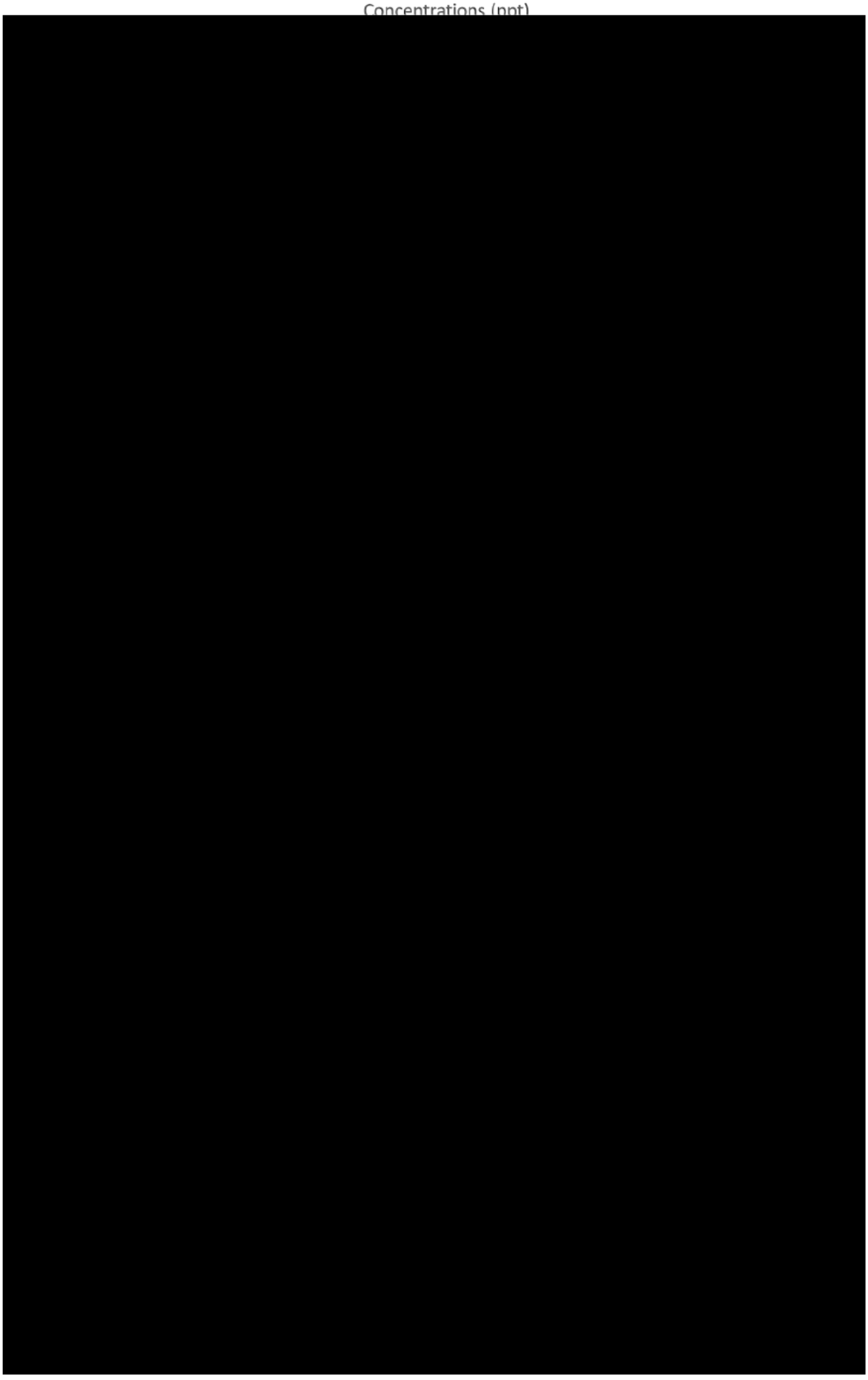
EPA Involvement: In Spring 2018, SESD conducted Phase I of a study which collected samples to characterize potential PFAS contributors on the Chattooga River under high flow conditions. The resulting data demonstrated no detectable amounts of PFOA, but four samples had detectable amounts of PFOS ranging from 20-83 ng/L.

Based on the Phase I results, Region 4 received feedback from ADEM and GA EPD regarding the results and the potential to conduct a Phase II study which would prove useful in determining PFAS concentrations under the following three conditions: (1) low flow conditions on Chattooga River; (2) current low flow conditions on the Coosa River (especially due to the higher levels found at the Gadsden and Centre intakes); and (3) sedimentation and resuspension in Lake Weiss. Region 4 agreed to conduct the Phase II study and it's planned for FY19.

CENTRE WATER & SEWER BOARD



Concentrations (ppt)



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